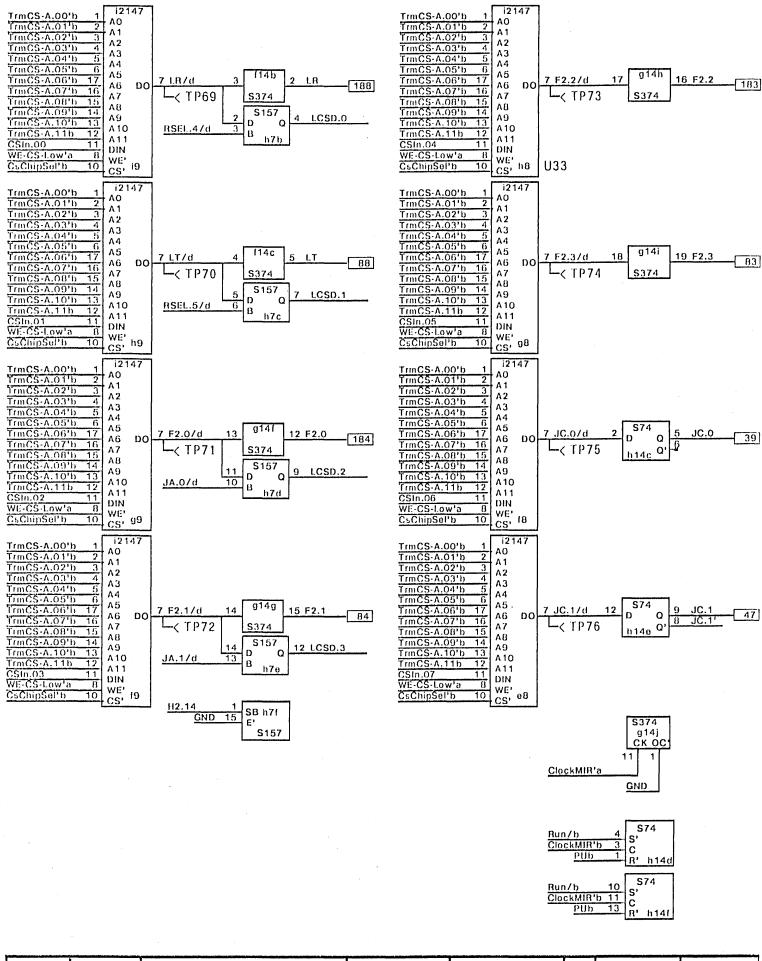
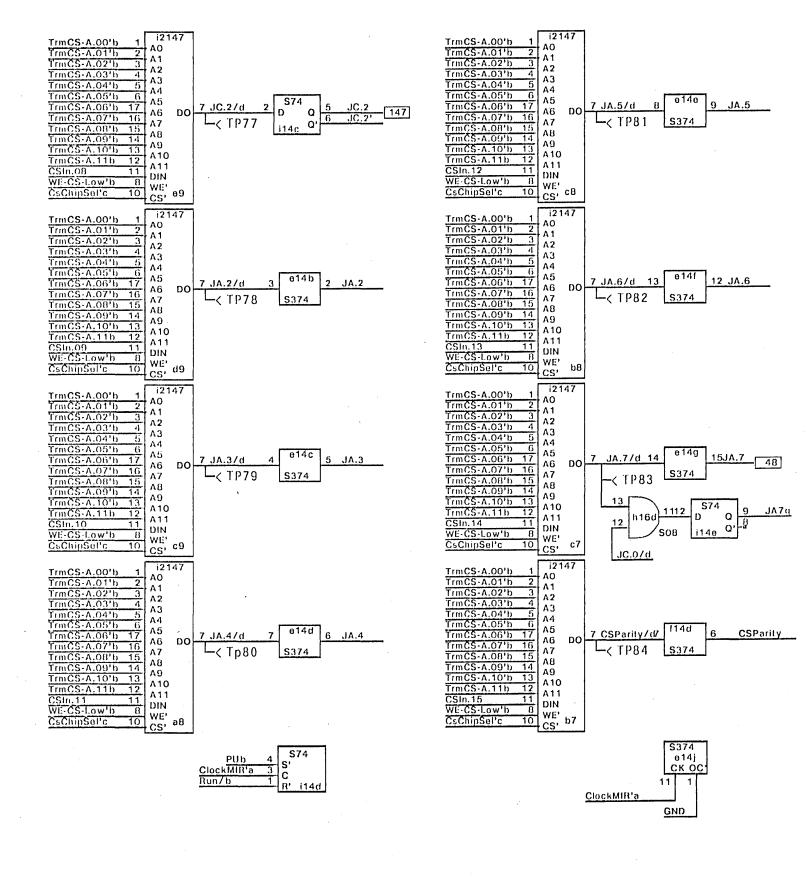


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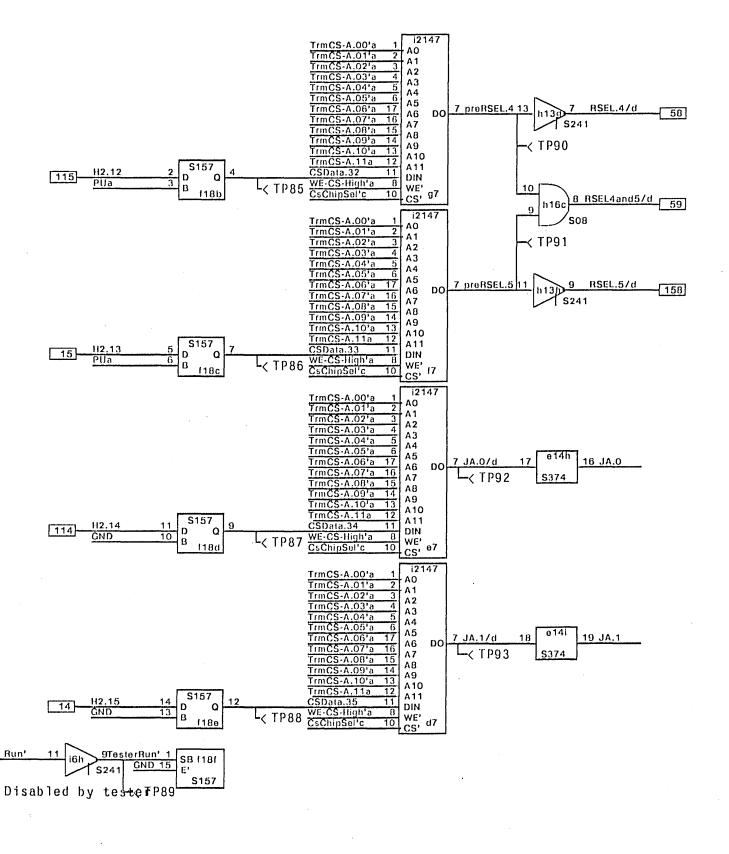


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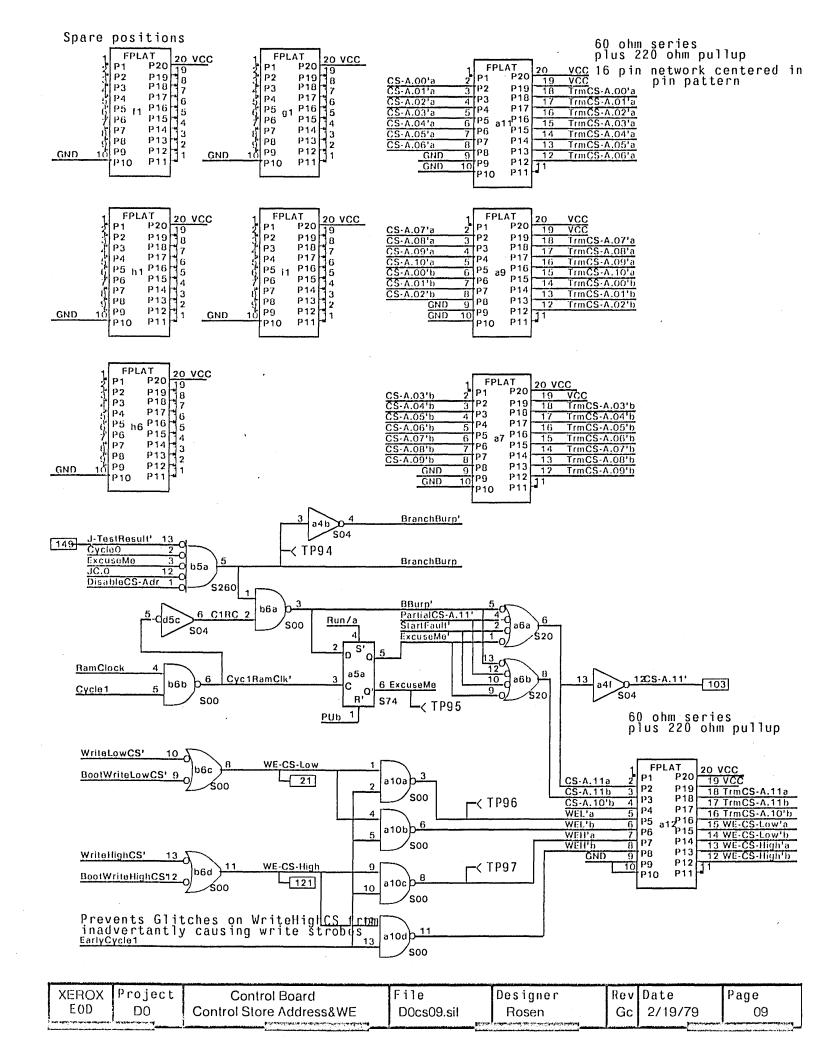


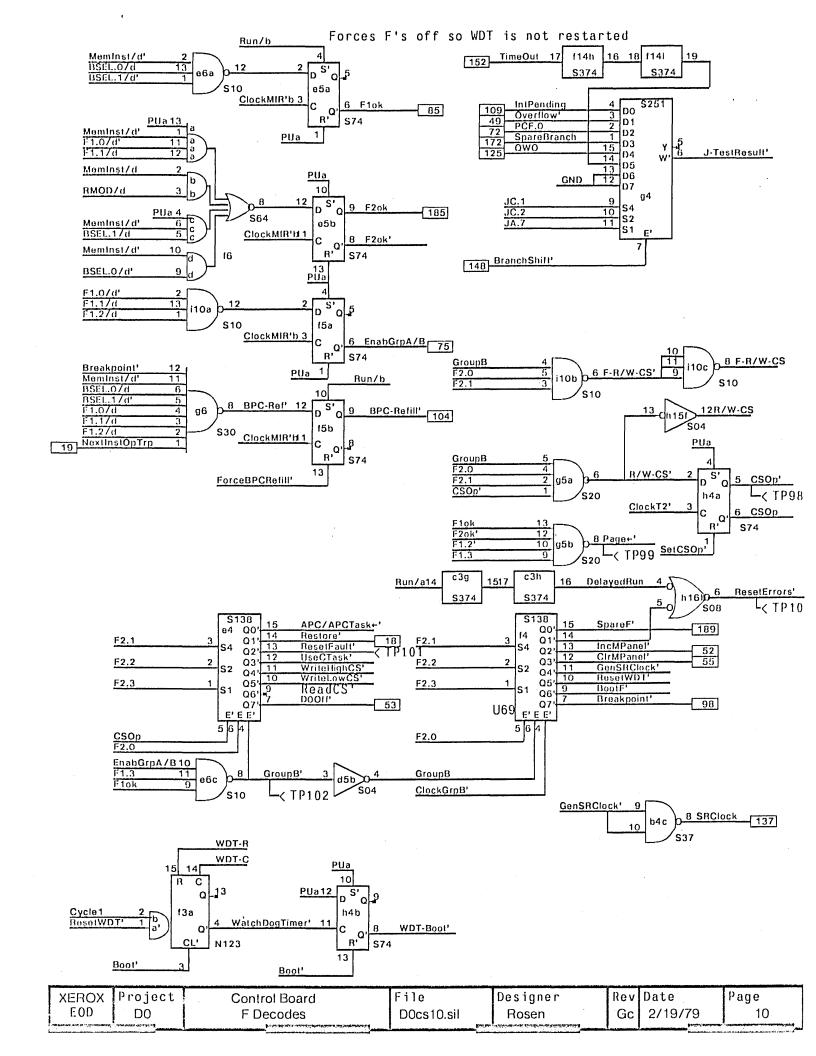
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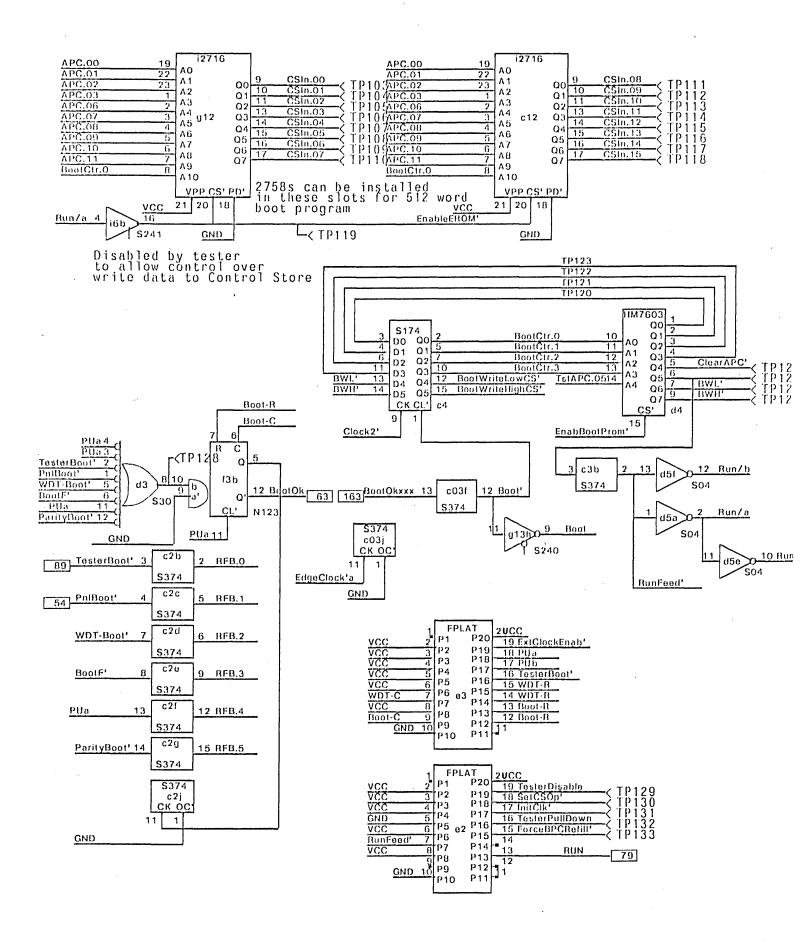
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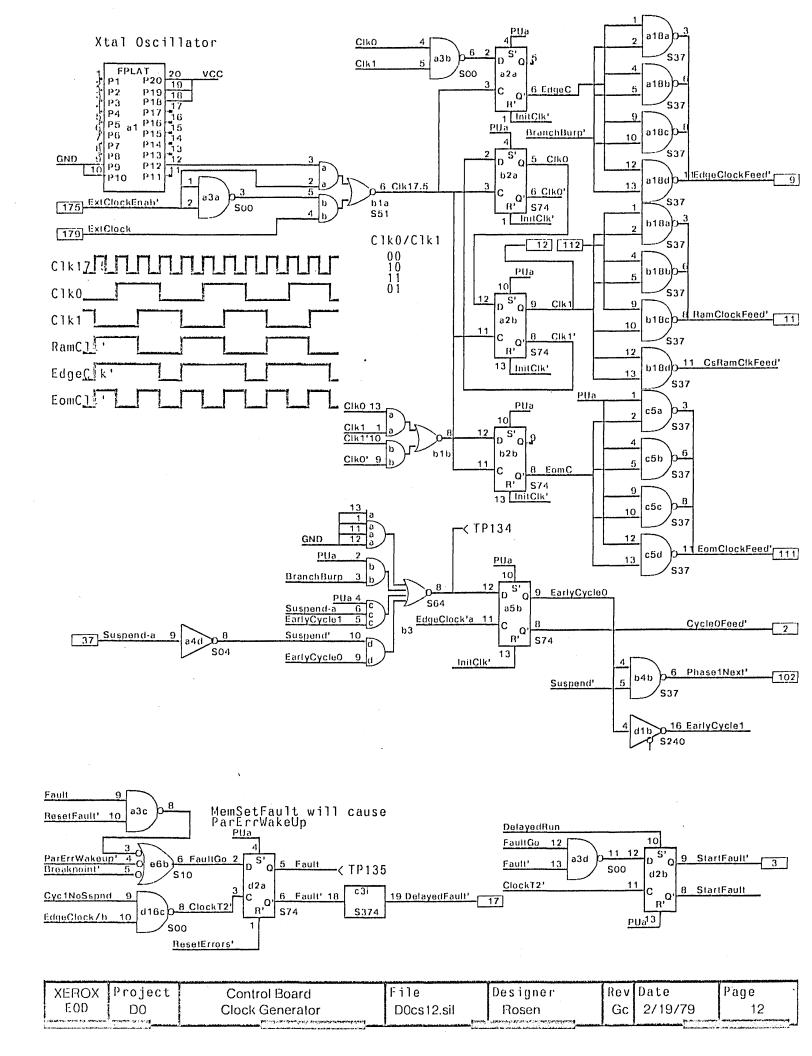
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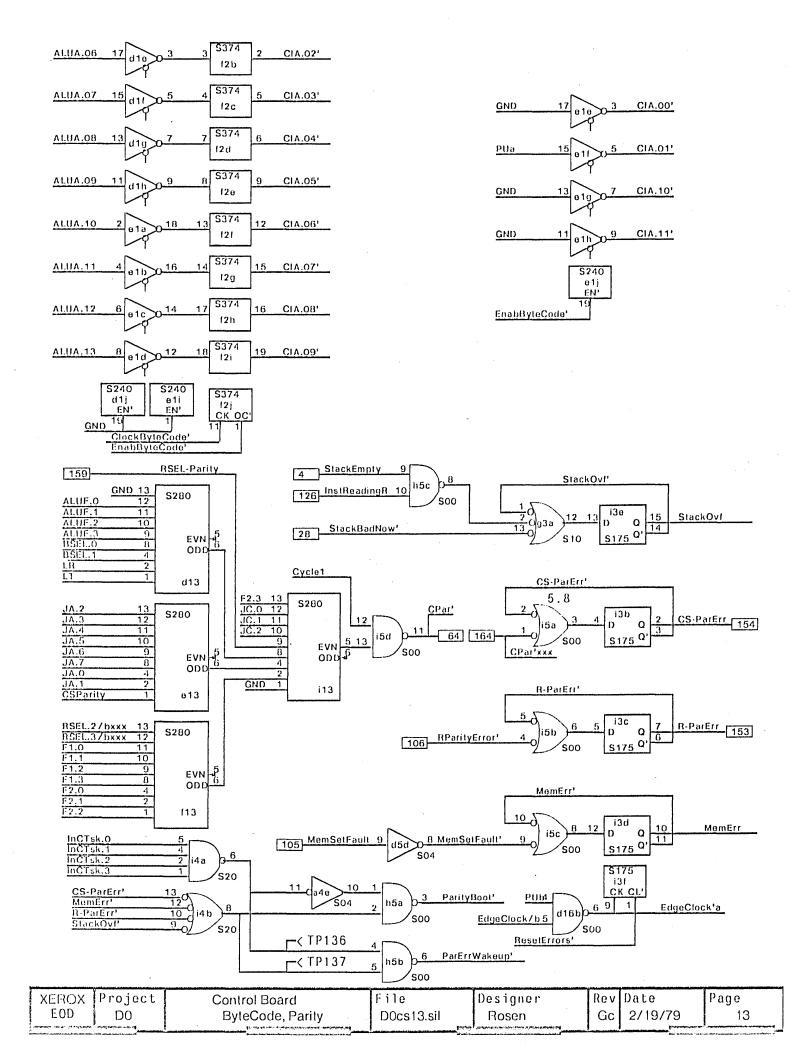


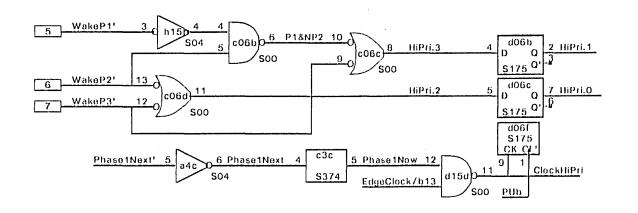


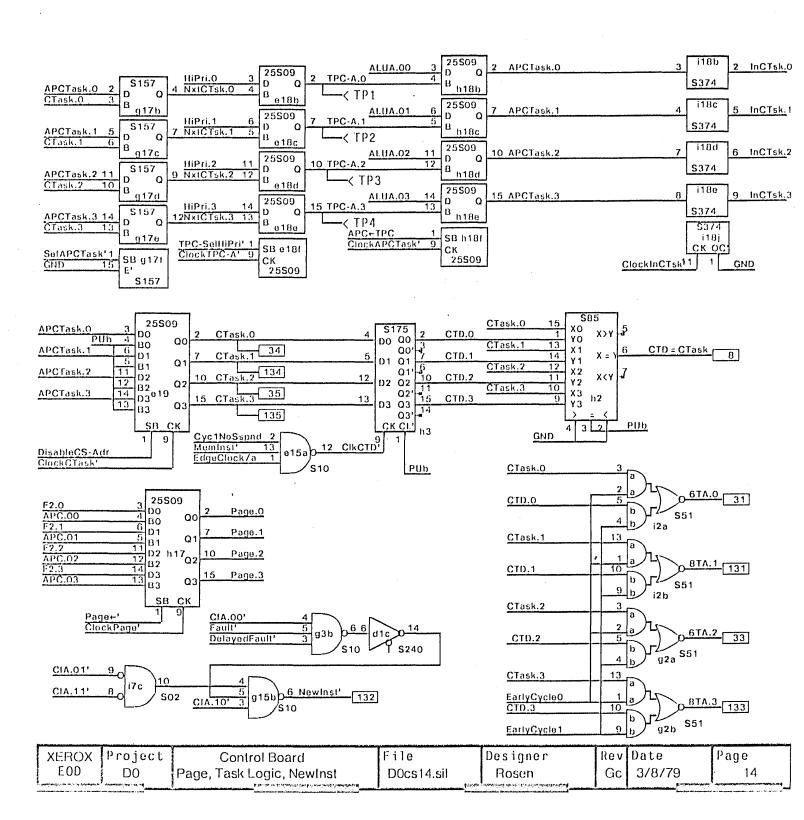


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### Rev E to Rev F 3/8/78 Brian Rosen

- 1) The Clock Drivers on page 12 were moved from c1/d1 to a18/b18 to eliminate waveform distortions due to refelections at the connector that caused false clocking on some boards. This necesitated moving the TPC-A multiplexor (page 1) from 518 to g17, and the Wake-up encoder S00 from a18 to c06. The wake-up lines now have long stubs on this board. The HiPri register was also moved up next to the S00 encoder (from e01 to d06).
- 2) The S30 at g6 that makes BPC-Rel' (page 10) had Breakpoint' added to it. This prevents the BPC-Refill trap from occuring when the sucessor of a breakpointed instruction points to an instruction which has NextInst or Nextop specified.
- 3) The trap location for Fault and BPC refill were reversed by changin the term on CS-A:11 from BPC-Refill! to StartFault' (\$20 at a6 on page 9). Faults trap to 1, BPC refill traps to 0. This forces a nextinst/nextop which both BPC refills and Faults to hit the fault handler rather than the BCP handler.
- 4) The EPROM sockerts were changed to allow 2716s or 2758s to be plugged in. This removes all dependancy on the +12/-5 supplies for booting, and allows a 1k boot program. This change also affected the bit tested to determine end of boot load (from APC.00 to APC.05, thus affecting TstAPC.00 on page 3 and page 11)
- 5) A new Clock was added for the EOM board (ROS printer). This clock, EomClock, is a 35ns (nominal) squarewave, with a clock driver. See page 12.
- 6) Final lostability changes were made, they include: a) A new signal, TesterDisable which is an independent pullup resistor on a new plat at e2 (page 11). This signal enables the S241 on page 3 which allows tester control of Ts1APC.05, Enable BootProm, EnabCIA. b)another new signal, also an independent pullup (page 11) which allows tester to force CSOp to set. c) an S51 at b1 now lets the tester turn off the oscillater with a new signal-ExtClockEnab\*. This signal is pulled up on the e3 plat instead of ExtClock'. c)the clock generator flip flops can be initialized by the InitClk' signal, which is pulled up on the e2 plat.
- 7) a minor improvement was achieved by eliminating the S32 at d6. Only one section was used (SRData, page 10) and an unused \$32 section was available in the e16 \$32. d6 is now empty

# Rev F to Rev G 4/17/78 Brian Rosen

- 1) The chip enables for the TPC rams (control sections on pages 1 and 2) were run through an \$241 controlled by DisableTester to allow tester control of APC inputs
- 2) The Run/a signal was run through another tester controlled \$241 gate to allow tester control of the EPROMs (page 11)
- 3) The select input of the data in mux for bits 32:35 of the control store (page 8) was modified to run through another \$241 gate to allow tester control of the data input to these 4 RAMs.
- 4) A new pull down resistor was added to the e2 plat (page 11) creating the signal TesterPullDown. This is the control input to the tester \$241 (page 3)
- 5) The signal ChipSelect' (an input to all 2147 RAM chips, pages 4:8) was broken up into 3 separate nets, each ifed from an S410 gate at i6 (page 3, nets CsChipSel'a, CsChipSel'b, and CsChipSel'c)
- 6) An adder, \$283 was added between CIA and the TPC ram inputs (page 1) to make the return address CIA + 1 (carries propogate throug 4 bits only). New chip is at c1.
- 7) The clock term for CTD (page 13) needed to have Meminst' as an input. Added a new gate (e15a) to make this term.

### Rev G to Rev II 9/8/78 Brian Rosen

- 1) The Abort' term on ClockTPC-A' (g15.11) page 2 is erroneous, it was removed.
- 2) The Cycle1 term on RunningT2 came very late for some qualifier terms. It was changed to CycleOFeed' thus cutting two gate delays
- 3) The Complement of the actual BranchBurp signal is needed for new clock driver scheme (see note 4 below). Added an invertor to BranchBurp using a4.3 and a4.4 creating BranchBurp'. The signal from b6.3 (page 9) had it name changed to BBurp
- 4) Clock Drivers (page 12) were changed from \$32s to \$37s. This changed all inputs on a18, b18 and c5.
- 5) CycleOFeed' is too late. The S37 that created this signal (page 12) was deleted. CycleOFeed' now come from a5.8 this affected the name of the signal at b3.5 (was EarlyCycle 1, now CycleOFeed') This EarlyCycleO is also used on a10 (page 9) and i2/g2 (page 13). The next revision (I) will remove some of these loads For now, they are all CycleOFeed'

## Rev H to Rev I - 11/18/78, C. Thacker

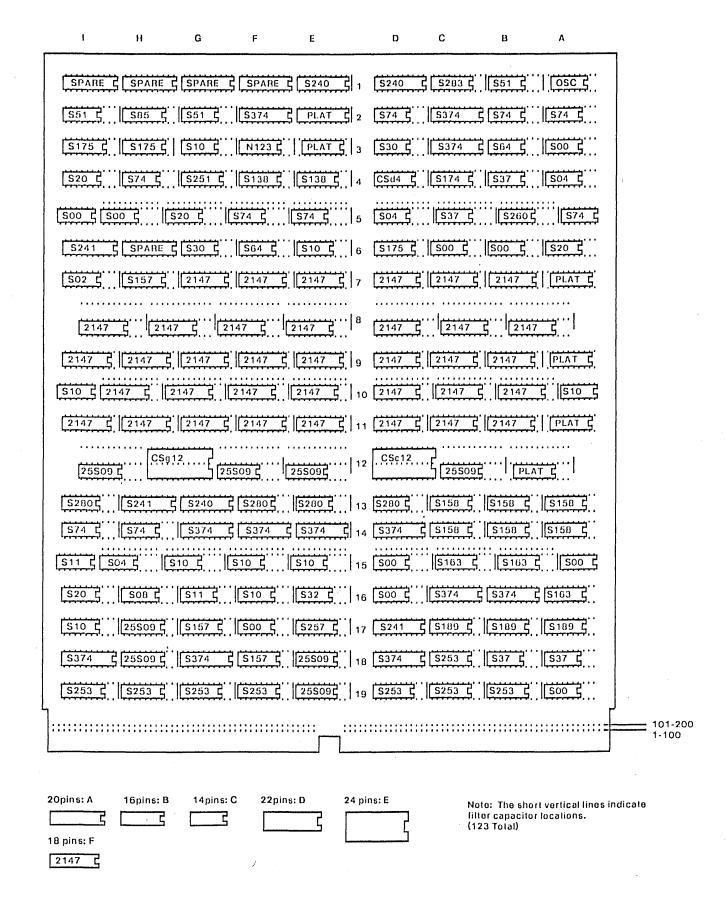
- 1) The register ByteCode is added (12,d1,e1, pg13). This register holds ALUA[6:13]' for one cycle following NextInst, so that the bytecode can be written into TPC by the subsequent RETURN. This allows task switches between bytecodes.
- 2) The signal SRData (buffered II2.15) has been deleted. This requires a backplane change (pg 4,5,10).
- 3) The branch logic on pg 10 is changed to add IntPending (in place of Disp999), QWO, and a SpareBranch.
- 4) The signal NxtInNoTsk' is generated in c6a (pg2). This signal is true if a task switch will NOT occur in the RETURN following a NextInst. This signal determines the source of APC data during NextInst.
- 5) The signal NxtInstRTN' is generated in i17c (pg2). This signal will be asserted by all RETURNs following NextInsts, and will cause ByteCode + 1 rather than CIA + 1 to be written into TPC.
- 6) The function decoder on pg 10 is changed to bring out SpareF', and rename DispCnt' and DispCir' to be incMPanel' and CirMPanel' 7) The generation of RUN(pg11) is different. The feed signal from d4.6 is latched, RUN is generated on platform e2.
- (NOTE: e2 is changed to 18pins). PwrBoot' is generated in e16d.
- 8) CSOP (pg10) is clocked by clockT2' (used to be called ClkFault', pg 12).
- 9) EarlyCycle1 (pg 12) was added to reduce loading on CycleOFeed'.
- 10) Clk1 is brought to the backplane (E12 -> E112) so that a delay can be inserted to reduce the width of RamClock.
- 11) a5.13 (pg 12) is connected to InitClk' rather than to PUa.
- 12) Stack overflow logic is added on pg 13.
- 13) NewInst (used to be an F) is generated on pg14.
- 14) Added TimeOut branch condition (pg10) and brought R-ParErr and CS-ParErr to the edge connector (pg 13).

- 1) Changed all plats to 20 pins on logic diagrams to cause ROUTE to do no trace cuts.
- 2) Added synchronizer on TimeOut (pg 10)
- 3) Changed DOOII' to E53, CIrMPanel' to E55 (pg 10).
- 4) Added spare IC's in positions f1, g1, h1, i1, h6.

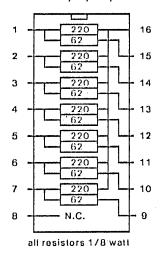
# Rev Ga to rev Gb (3/8/79 - CT)

1) Added g3b, d1c on pg 14. This change keeps NewInst from occurring when the first microinstruction of a bytecode is aborted. Rev Gb to rev Gc (7/17/80 - CT) Eliminated signal PwrBoot', changed RFB register clocking (pg 11).

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XEROX	Project	Control Board	File	Designer	Rev	Date	Page
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XEROX Project Module Layout- DO Control Store File Dogst aγρυτεί Rev Date Gc 7/18/80

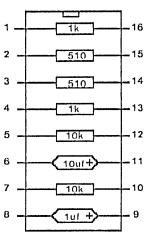


Note: Bourns has made a custom network for this platform.

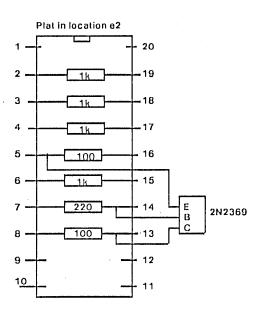
16 pin platforms plugged into the middle of the 20 pin pattern

Pin 1 of plat goes in pin 2 of pattern





all resistors 1/4 watt all capacitors Tantalum



all resistors 1/4 watt

	XEROX	Project	Control Board	File	Designer	Rev	Date	Page -
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